

EAGLE

## Work Order ID 57113

March 23, 2010 7:47:08 AM

Page 1

Item ID: D4065-041

Revision ID:

Item Name: Duct Assembly

Start Date: 3/23/10

Start Qty: 2.00

Required Date: 3/30/10

Req'd Qty: 2.00

Reference:

Cust Item ID:

Customer:

PRELIMINARY ISSUE

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

100



HandThermo

Hand Finishing Thermoforming

Memo

Pick Kit  
(D4065-1)  
(D4560-3)

0.00

0.00

②

Wh 10/04/08

PTO →

110



HandThermo

Hand Finishing Thermoforming

Memo

1- Clamp D4065-1 and D4065-3 to assembly fixture DT9598  
2- Seal mating edges wit EZ250150 Adhesive along perimeter with a mininum  
thickness of 0.020"  
3- clean any excess glue from new sealed edges

0.00

0.00

②

Wh 10/04/08

120



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

②

Wh 10/04/08

W/O: 57113		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/04/07	100	CHANGE ROUTINGS FOR D4065-041 To include production routings for D4065-1 & D4065-3. and add steps for material drying. (See Attached.)	W	10/04/07.			S 10/04/07

Part No: D4065-041 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 57113

March 23, 2010 7:47:09 AM

Page 2

Item ID: D4065-041

Accept

Revision ID:

Item Name: Duct Assembly

Start Date: 3/23/10 Start Qty: 2.00

Required Date: 3/30/10 Req'd Qty: 2.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Quality Control

Memo

0.00

*Discontinue  
to Release New A Day*

*+3*

140

Identify as per dwg & Stock Location:

0.00



Packaging

Packaging

Memo

*SHIP 2 PAGE  
ONE PERIC*

0.00

*10/04/16 (3)*

150

QC21- Final Inspection - Work Order Release

0.00



QC

Quality Control

Memo

0.00

*10/04/16  
W. 10/04/16*

POSITIVE RECALL

EFFECTIVE *10.03.23* AUTH *LA*

RELEASED *10.04.16* DATE *LS*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

March 23, 2010 7:47:08 AM

Page 1

Work Order ID: 57113

Parent Item: D4065-041

Parent Item Name: Duct Assembly

Comments: IPP Rev:A New Issue 10/03/16 Rev A DL verified by:DD

Start Date: 3/23/10

Required Date: 3/30/10

Start Qty: 2.00

Required Qty: 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D4065-1 Fwd Duct D4065-3 Aft Duct EZ250150 Adhesive, 3M Scotch Weld		Manufactured	No			100	Each	0.0000	2.0000			
						w/o 57114						
		Manufactured	No			100	Each	0.0000	2.0000			
						w/o 57115						
		Purchased	No			110	Each	0.0000	2.0000			
						M 113830						

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order:	57113
Description: Duct Assembly		Part Number:	D4065-041
Inspection Dwg: D4065-041 Rev: A		Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

### THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than "				
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: Whe

Date: 10/04/12

### TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
5.5"	± 0.030	5.5"	✓			
7.7"	± 0.100	7.8"	✓			
10.00"	Ref.	10.125"	✓			
5.75"	± 0.030	5.75"	✓			
4.19"	± 0.006	4.19"	✓			
0.050"	M.I.W.	0.051"	✓			

Measured by: Whe

Date: 10/04/12

Audited by: BB

Date: 10/04/12

Prototype Approval:

Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/DL	



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

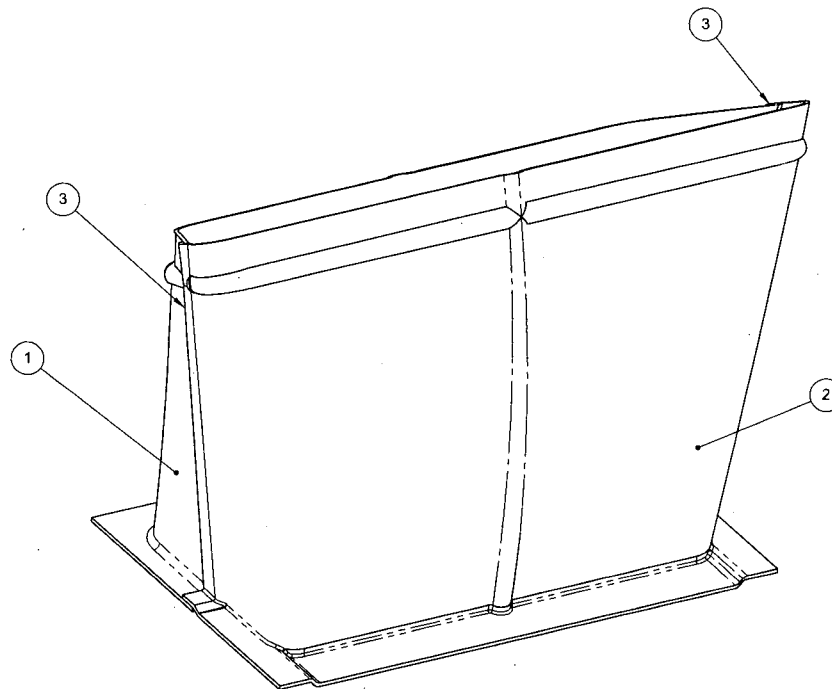
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

ITEM	QTY -041	P/N	DESCRIPTION
	X	D4065-041	DUCT ASSEMBLY
1	1	D4065-1	FWD DUCT
2	1	D4065-3	AFT DUCT
3	A/R	EZ250150	ADHESIVE, 3M SCOTCH WELD



W6  
57113

**D4065-041 DUCT ASSEMBLY**

**PRELIMINARY ISSUE**

10.03.05

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4065-041" USING VIBRATING STYLUS
- 7) WEIGHT: 0.68 lbs
- 8) SEAL MATING EDGES WITH EZ250150 ADHESIVE ALONG MATING PERIMETER WITH MINIMUM THICKNESS OF 0.020"

PA1	NEW ISSUE	RF	10.03.05
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. PA1
MFG. APPR.		D4065	SHEET 1 OF 4
APPROVED		TITLE	SCALE
DE APPR.		212S DETAIL PARTS	NTS
DATE	10.03.05	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD  THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS  NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT  WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

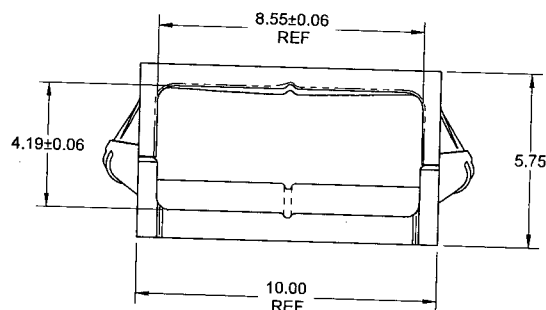
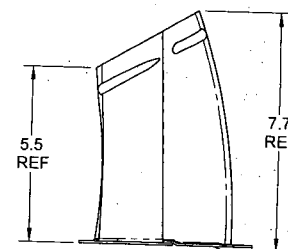
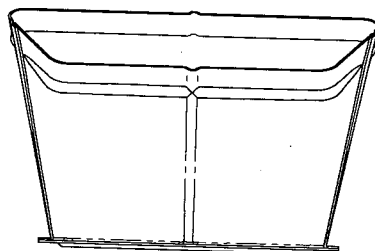
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4065-041 DUCT ASSEMBLY**

**PRELIMINARY ISSUE**

~~10~~ 10.03.05

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. PA1
MFG. APPR.		<b>D4065</b>	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		<b>212S DETAIL PARTS</b>	NTS
DATE	<b>10.03.05</b>	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

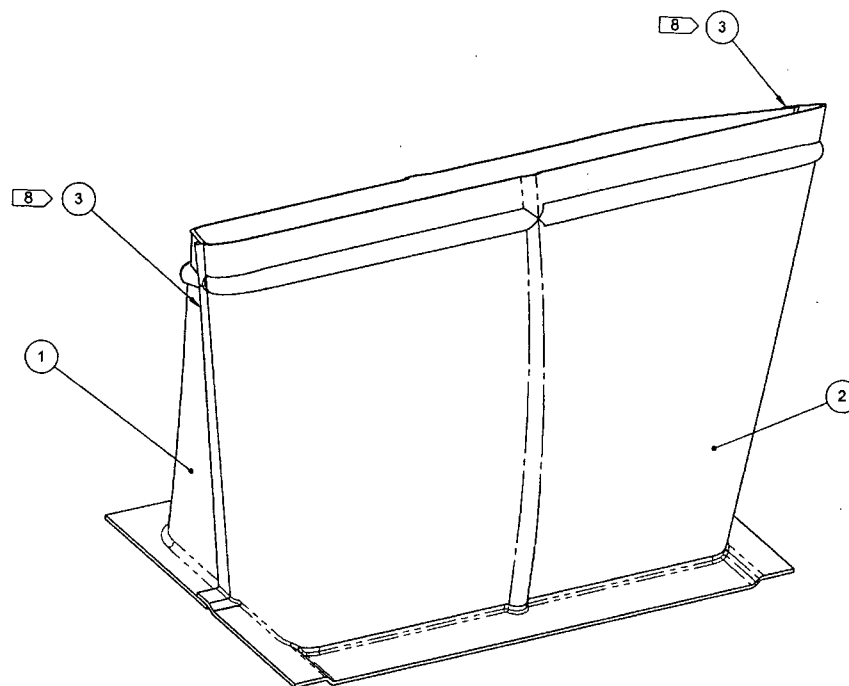
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	QTY -041	P/N	DESCRIPTION
	X	D4065-041	DUCT ASSEMBLY
1	1	D4065-1	FWD DUCT
2	1	D4065-3	AFT DUCT
3	A/R	EZ250150	ADHESIVE, 3M SCOTCH WELD



**D4065-041 DUCT ASSEMBLY**

**REFERENCE ONLY**

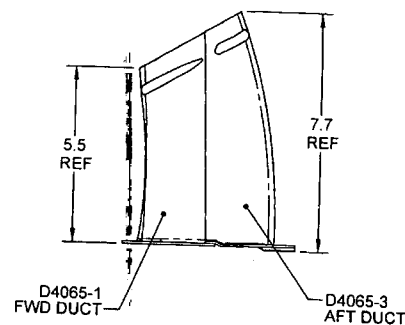
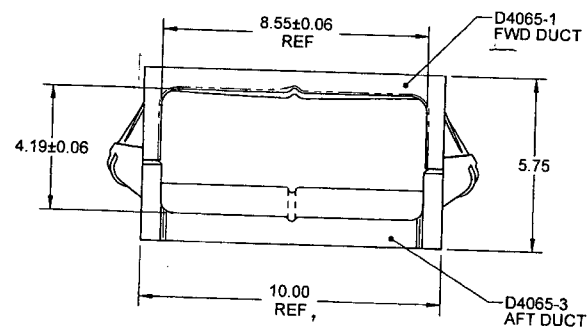
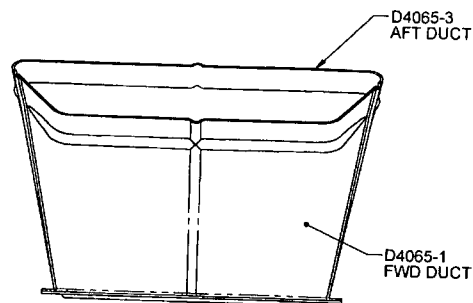
57113

**RELEASED**  
R 2010-04-14  
mp

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4065-041" USING VIBRATING STYLUS
- 7) WEIGHT: 0.68 lbs
- 8) SEAL MATING EDGES WITH EZ250150 ADHESIVE ALONG MATING PERIMETER WITH MINIMUM THICKNESS OF 0.020"

A NEW ISSUE		RF	10.04.13
REV.	DESCRIPTION		BY DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. A
CHECKED	RF	D4065	SHEET 1 OF 4
MFG. APPR.	RF	TITLE	SCALE
APPROVED	RF	DUCT ASSEMBLY	NTS
DE APPR.	RF	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	10.04.13		



**D4065-041 DUCT ASSEMBLY**

**REFERENCE ONLY**

57113

**RELEASED**  
2010-04-14  
MD

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. A
MFG. APPR.	RF	D4065	SHEET 2 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	DUCT ASSEMBLY	NTS
DATE	10.04.13	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

# Routing Print

Monday, April 12, 2010 2:44:09 PM

Page 1 of 2

Routing Seq ID/ Description/Memo	Work Center ID	Tool Kit/Tape	Std Process ID/ Description	Yield %	Queue Time	Setup Time	Machine Time	Labor Time	Move Time	Var. Outpl/ Outpl. LT
<b>Item ID:</b> D4065-041										
<b>Item Name:</b> Duct Assembly										
<b>Routing Type:</b> Production										
100	Thermoform									
HAND FINISHING				100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
THERMOFORMING					0.0000	0.0000	0.0000	0.0000	0.0000	
Cut Blanks										
<b>Total for Routing Sequence [ 100] :</b>					<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>
105	HandThermo			100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Dry Sheet as per QSI022 Polycarbonate					0.0000	0.0000	0.0000	0.0000	0.0000	
Temp: _____										
Time IN: _____										
Time OUT: _____										
<b>Total for Routing Sequence [ 105] :</b>					<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>
110	Thermoform			100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
THERMOFORMING					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
MACHINE					0.0000	0.0000	0.0000	0.0000	0.0000	
Thermoform D4065-1 and D4065-3										
as per DT9581 and Dwg. D4065 and Folio FTA 071										
Dwg. Rev. _____										
Folio Rev. _____										
<b>Total for Routing Sequence [ 110] :</b>					<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>
120	QC		QC2	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
			QC2- Inspect parts	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
			off machine							
			FAI/FAIB							
<b>Total for Routing Sequence [ 120] :</b>					<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>
130	Thermoform			100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HAND FINISHING					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
THERMOFORMING					0.0000	0.0000	0.0000	0.0000	0.0000	
Trim Part D4065-1 and D4065-3 parts for Assembly										
<b>Total for Routing Sequence [ 130] :</b>					<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

# Routing Print

Monday, April 12, 2010 2:44:09 PM

Page 2 of 2

Routing Seq ID/ Description/Memo	Work Center ID	Tool Kit/Tape	Std Process ID/ Description	Yield %	Queue Time	Setup Time	Machine Time	Labor Time	Move Time	Var. Outpl/ Outpl. LT
140 HAND FINISHING THERMORORMING	HandThermo			100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1-Scuff mating edges with scotchbrite pad, wipe with wash & wipe and allow to dry.										
2-Clamp D4065-1 and D4065-3 to assembly fixture DT9508										
3-Seal mating edges with EZ Adhesive along perimeter with a minimum thickness of 0.020"										
4-Clean any excess glue from newly sealed edges										
Total for Routing Sequence [ 140] :					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
150	QC		QC2	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
			QC2- Inspect parts off machine FAI/FAIB	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total for Routing Sequence [ 150] :					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
160	QC		QC5	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
			QC5- Inspect part completeness to step on W/O	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total for Routing Sequence [ 160] :					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
170 Packaging	Packaging		Packaging3	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
			Identify as per dwg & Stock Location: _____	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total for Routing Sequence [ 170] :					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
180	QC		QC21	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
			QC21- Final Inspection - Work Order Release	100.00%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total for Routing Sequence [ 180] :					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total for Alternate Route [Production] of Item [D4065-041]:					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000